

claim 2 into independent form including all of the limitations of the base claim 1. There are no intervening claims. No new matter has been added. Furthermore, the applicants have amended the limitation "said surfaces" to --said surface--. In that claim 1 recites only a single surface, no new matter has been added by the amendment of claim 2.

The Examiner has rejected claims 2 and 3 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner maintains that the following limitations are unclear and indefinite because the thickness is not defined properly:

Claim 2: "a black matrix layer is formed below said underlying layer to a thickness with which said black matrix layer protrudes from a surface of said color filter corresponding to said pixel electrode".

Claim 3: "overlapped edge portions have a thickness with which said overlapped edge portions have a thickness with which said overlapped edge portion protrudes from a surface of said color filter".

In response, the applicants call to the Examiner's attention that also claim 3 has been rewritten into independent form including all of the limitations of the base claim 1. There are no intervening claims. In both claims 2 and 3, the applicants have amended the limitation "a thickness with which" to --a thickness equal to a distance which--.

Therefore, claim 2 now reads in part-- a black matrix layer is formed below said underlying layer to a thickness equal to a distance which said black matrix layer protrudes from a surface of said color filter corresponding to said pixel electrode--.

Claim 3 now reads in part --overlapped edge portions have a thickness with which said overlapped edge portions have a thickness equal to a distance which said overlapped edge

portion protrudes from a surface of said color filter--.

Support for the amendments to claims 2 and 3 is provided by the fact that one of ordinary skill in the art would interpret the phrase “a thickness with which said black matrix layer/ overlapped edge portion protrudes from a surface...” as meaning a thickness equal to a distance which said layer/portion protrudes from a surface. Therefore, no new matter has been added by the amendments to claims 2 or 3.

Consequently, the applicants respectfully request the Examiner to withdraw the rejections of claims 2 and 3.

The applicants have amended claim 15 to replace the incorrect phrase “said at least ones” with the phrase --said at least one--. No new matter has been added.

Prior to addressing the rejections over the prior art, the applicants call to the Examiner’s attention that additionally claim 13 has been rewritten into independent form including all of the limitations of the base claim 11. There are no intervening claims. No new matter has been added.

With respect to claim 1, the applicant has amended claim 1 to add the limitation

--a thickness of said liquid crystal layer between said pixel electrode and said common electrodes being substantially the same such that a first gap at edge portions of said pixel electrode becomes substantially the same as a second gap at the center portion thereof,--

The amendment to claim 1 is supported by the disclosure in the specification with respect to FIG. 7A, as found on page 16, lines 21-26, which discloses that the pixel electrode 3 is not overlapped with the slope portions 13 as shown in FIG. 7A. More preferably, a gap d_1 at the edge portions of the pixel electrode 3 becomes substantially the same as the gap d_0 , at the center portion thereof as shown in FIG. 7B.

As a result, no new matter has been added to claim 1.

Allowable Subject Matter: Claims 2-3 and 13

The Examiner has indicated that claims 2-3 and 13 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, as set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims.

In response, as noted previously, the applicants have amended claims 2 and 3 to overcome the rejections under 35 U.S.C. 112, second paragraph, and have rewritten both claims 2 and 3 into independent form, including all of the limitations of the base claim 1 (as it existed prior to the current amendment to claim 1). Similarly, the applicants have rewritten claim 13 into independent form, including all of the limitations of the base claim 1 (as it existed prior to the current amendment to claim 1). Therefore, the applicants respectfully request that the Examiner consider claims 2-3 and 13 to be in condition for allowance.

Prior Art Rejections: Claims 1, 4-12 and 14-15

The Examiner has rejected claims 1 and 6-8 under 35 U.S.C. 102(e) as being anticipated by Kume et al (US 6,115,098 - filed December 23, 1998 - issued September 5, 2000).

The Examiner asserts that Kume et al disclose all of the limitations of claims 1 and 6-8.

The applicant directs the Examiner's attention to the fact that, as noted previously, claim 1 has been amended to add the limitation --a thickness of said liquid crystal layer between said pixel electrode and said common electrodes being substantially the same such that a first gap at edge portions of said pixel electrode becomes substantially the same as a second gap at the center portion thereof--

With respect to claim 1, as amended, the applicant maintains that in Kume et al, FIG. 4A, the signal electrode 3 overlaps with the sloped portions of the liquid crystal region 8, and

therefore, the thickness of the liquid crystal layer is changed between the opposing signal electrodes 3 and 4. In such a structure, the thickness of the liquid crystal layer at the pixel region is not uniform with the result that there is a deterioration in the optical characteristics of the display.

In contrast, in the present invention recited by claim 1, a thickness of said liquid crystal layer between said pixel electrode and said common electrodes being substantially the same such that a first gap at edge portions of said pixel electrode becomes substantially the same as a second gap at the center portion thereof, that is, the thickness of the liquid crystal layer at the pixel region is kept uniform so that improved optical characteristics are obtained over the prior art of Kume et al.

As a result, claims 1 and 6-8 patentably distinguish over Kume et al. Consequently, the applicants respectfully request the Examiner to withdraw the rejections of claims 1 and 6-8.

The Examiner has rejected claims 4-5, 9-12, and 14-15 under 35 U.S.C. 103(a) as being unpatentable over Kume et al in view of Kuo (US 6,424,397 B1 - filed June 2, 2000 - issued July 23, 2002).

The applicants again call to the Examiner's attention that claim 1 has been amended to recite the limitation -- a thickness of said liquid crystal layer between said pixel electrode and said common electrodes being substantially the same such that a first gap at edge portions of said pixel electrode becomes substantially the same as a second gap at the center portion thereof.

The applicant maintains that Kuo discloses in FIG. 4E a transparent electrode layer 412 overlapping with a first protrusion element 414 protruding into liquid crystal layer 420. Therefore, neither Kume et al nor Kuo, taken alone or in combination, disclose, teach or suggest

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the limitations of claim 1 of a thickness of said liquid crystal layer between said pixel electrode and said common electrodes being substantially the same such that a first gap at edge portions of said pixel electrode becomes substantially the same as a second gap at the center portion thereof, that is, the thickness of the liquid crystal layer at the pixel region is kept uniform so that improved optical characteristics are obtained over the prior art of Kume et al and Kuo, taken alone or in combination.

Consequently, claims 4-5, 9-12, and 14-15 patentably distinguish over Kume et al and Kuo, taken alone or in combination. As a result, the applicants respectfully request the Examiner to withdraw the rejections of claims 4-5, 9-12, and 14-15.

The foregoing Amendment and Remarks establish the patentable nature of all of the claims in the application, i.e., claims 1-15. No new matter has been added. Wherefore, early and favorable reconsideration and issuance of a Notice of Allowance are respectfully requested.

Respectfully submitted,



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